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What ~~Is~~ Claimed ~~Is~~:

1. A method for producing semiconductor components, in which at least one doped region is introduced in a wafer, wherein

- a solid glass layer (2; 4; 2, 3; 4, 5), provided with dopant, is applied at least on one of the two sides of a semiconductor wafer (1);

- in a further step, the wafer is heated to high temperatures so that the dopant from the glass layer penetrates deep into the wafer to produce the at least one doped region (10; 11), the wafer being heated up to a temperature of about 1200 to about 1280 degrees Celsius, in particular a temperature of about 1265 degrees Celsius;

- and in another step, the glass layer is removed.

2. The method as recited in Claim 1,
wherein the glass layer is applied using a chemical vapor deposition method.

3. The method as recited in Claim 2,
wherein the chemical vapor deposition method is carried out at atmospheric pressure.

4. The method as recited in one of the preceding claims,
wherein the wafer is heated in oxidizing atmosphere.

5. The method as recited in one of the preceding claims,
wherein the temperature is maintained for about 20 to 30 hours, preferably 21 hours.

6. The method as recited in one of the preceding claims,
wherein the glass layer is applied both on the front side and on the back side of the wafer (2, 4), the dopant on the back side of the wafer optionally having the same or the opposite doping type compared to the doping type of the dopant on the front side.

7. The method as recited in one of the preceding claims,

wherein the glass layer has a dopant constituent of greater than 2 percentage by weight, particularly about 3 to 6 percentage by weight.

8. The method as recited in Claim 6, wherein wherein the dopant constituent of the glass layer on the front side is different from the dopant constituent of the glass layer on the back side.

9. The method as recited in one of the preceding claims, wherein the glass layer has a thickness of about 2 micrometers.

10. The method as recited in one of the preceding claims, wherein a neutral glass layer (3; 5; 3, 5) is applied on the glass layer prior to heating the wafer, the neutral glass layer being removed together with the glass layer after the heating of the wafer.

11. The method as recited in Claim 10, wherein the neutral glass layer has a thickness of about 0.5 micrometers.

12. The method as recited in one of the preceding claims, wherein the glass layer is removed using hydrofluoric acid.